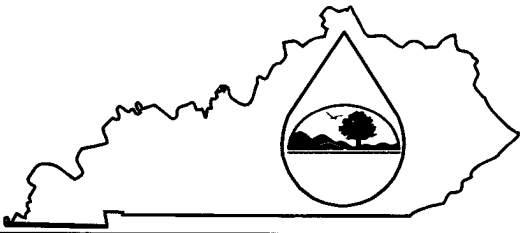
KPDES FORM SDAA



Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

I. Project Information

Facility Name: KDNR No. 864-0195 Argus Energy, LLC

Location: P.O. Box 90 Lovely, KY 41231	**County: Lawrence**

Receiving Waters Impacted: Laurel Creek of Rockcastle Creek

II. Socioeconomic Demonstration

1. Define the boundaries of the affected community:

The proposed project is an area, contour, and highwall/auger mining operation located at 37-56-43 N and 82-35-59 W (KDNR Permit No. 864-0195). The project will recover the Broas and Peach Orchard coal reserves within the project area.

The site is located approximately 2 miles northwest of the junction of SR 2033 and SR 645, within the Milo 7.5 minute quadrangle. The nearest community is Clifford, approximately 1 mile to the west.

KDNR Permit No. 864-0195 will cover three existing KDNR permits that were originally permitted by M&G Coal Sales, Inc. (refer to attached exhibit, which depicts each of the KDNR permits) Each of the M&G Coal Sales, Inc. permits were transferred to Argus Energy, LLC (Argus). Argus has KPDES General Permit coverage for each of the discharge points and has conducted monitoring of each point. Argus now seeks to overlap the three existing KDNR permits with a single KDNR permit and combine all discharge points under a single KPDES permit.

All discharge would enter UTs of Laurel Creek, Splitlog Branch, Maynard Trace Branch, or Laurel Creek. Laurel Creek (HUC Number is 05130101420010), is a tributary of Rockcastle Creek of the Tug Fork of the Big Sandy River.

2. The effect on employment in the affected community:

The economy in this portion of Lawrence County is dependent on the mining industry. The proposed surface mine would create 36 jobs. Additionally, the surface mine tonnage would allow the re-opening of an idled deep mine and preparation plant that would also create 36 jobs and 30 jobs, respectively. Therefore, this operation will provide in total for the continuation of 102 higher-wage permanent jobs in the area work force. This also positively affects as many as 153 employees in the support industries that will help to supply the material and equipment needed for mining, as well as other services, such as engineering and training. See the table below for employment data for Lawrence County.

Labor Statistics	Lawrence County
Labor Force	5,973
Percent Unemployment	13.5%
Total Unemployed	806
% of Labor Force Employed by this Project	1.7%
% of Labor Force Affected by this Project	2.6%

2009, Workforce Kentucky

With the current unemployment rates in this county, it is likely that a new mine will lead to an increase in employment, but at the very least, it will certainly avoid a decrease in local employment figures. The current unemployment rate of 13.5% is higher than the Kentucky average of 10.7% and the national average of 9.8%.

3. The effect on median household income levels in the affected community:

This mining operation would provide employment for an estimated 102 employees. These mining positions prove to be higher paying jobs than other industries in Lawrence County. This also positively affects as many as 153 employees in the support industries that will help to supply the material and equipment needed for mining, as well as other services, such as engineering and training. See the table below for income data for this county.

Wages	Lawrence County
All Industries	$642.00
Mining	$1,000.17

Weekly salary provided by 2009, Kentucky Workforce Development Cabinet

The average weekly wage in the mining industry is approximately 56% higher compared to the average weekly wage for all industries in all Lawrence County. Loss of these higher-paying jobs would result in decreased revenue to local businesses that cater to the needs of the employees on a daily basis.

4. The effect on tax revenues of the affected community:

This mine facility will provide jobs in communities in this portion of Lawrence County and help prevent the loss of jobs when an existing area facility closes or moves to another area. Recovery of the coal reserves, located along Laurel Creek and its tributaries, will yield over 3.6 million tons of coal. This will generate over $11 million in severance taxes, of which the surrounding counties will receive a total of over $1.6 million (15 percent). Additional revenue will be given to local businesses, generated through increased employment to handle support services catering to the mining operation directly and to the needs of the employees on a daily basis. Local income taxes, property taxes, and sales taxes will also add to revenue brought in by the mining facility.

5. The effect on an existing environmental or public health in affected community:

Recovery of the coal reserves, located along Laurel Creek and its tributaries, will yield over 3.6 million tons of coal. This will generate over $11 million in severance taxes, of which the surrounding counties will receive a total of over $1.6 million (15 percent). This money can be used for environmental protection such as sewage disposal, sanitation, and solid waste disposal, which will have beneficial effects on the existing environment and public health.

With the conclusion of mining, the project area will be reclaimed, including existing ponds and structures. Any temporarily impacted streams will be stabilized, restored, and a riparian buffer will be established. These

rehabilitated streams will curb sedimentation and provide a habitat for aquatic species and wildlife. Until final bond release, various sediment and treatment ponds will remain. Discharge will be treated as necessary and practicable, to ensure that the water leaving the permit is within effluent limits of its KPDES permit.

During the reclamation of the project site, all existing dumps will cleaned up and the garbage disposed of at a proper facility.

Upon final closing of the project site, it is possible that an increase in flora and fauna will occur compared to the original land use and could increase the natural habitat as well as increase tourism.

6. Discuss any other economic or social benefit to the affected community:

This facility will not only provide mining jobs but will also provide jobs that help support the mining industry. Equipment salesmen and repairmen, mining and engineering consultants, fuel and transportation providers will be needed as a result of the mine. The creation or maintenance of as many as 153 more jobs in the surrounding community, will spur community development, thus creating even more employment opportunities in the local area.

The increased payment of property taxes will benefit schools so that they have funding to purchase better equipment, improve their facilities, and increase salaries for the teachers. In addition, the increased tax payments will provide additional money for government services to better serve the local area citizens.

This money will be returned to the community, providing funds to help establish alternative industries for additional local employment opportunities, as well as providing funding for public safety, environmental protection, public transportation, vocational training, local health/recreational/ educational facilities, social services, industrial/economic development, workforce training, and the secondary wood industry. Property values increase when land is active. Therefore, when mining is being conducted, the land has an increased value requiring increased property taxes to be paid in to the county operating fund.

Surface mining is the most efficient and economical plan for recovery of the coal associated with this project. This allows for maximum removal of coal reserves, increasing the amount of tax dollars that contribute to the state and local economy.

III. Alternative Analysis

1. Pollution prevention measures:

Several alternatives were evaluated for prevention of water pollution in this project area. Evaluated alternatives include:

a) Avoidance of the project (short-term)

Avoiding this project would mean that the advantages of economic development in the Lawrence County community area would not be realized. At a minimum, 102 local jobs would be lost, the tax base would diminish, $11 million in taxes would not be collected and local businesses would not prosper to the same extent.

b) Additional Levels of Separation

Further prevention could include covering or treating chemically of reactive materials, reducing the disturbed surface area at any one time, or the separation of normal storm runoff and active site runoff.

c) Preventive Design

Preventive design could include creation of moderate gradients and inclines to slow runoff or diversion of waterways and drainage. With these methods, the amount and frequency of flow through active mining sites can be reduced. All the water that leaves the site will be treated with a system of sediment ponds. Each pond will store any runoff leaving the site and provide adequate time for to settling of the sediment to occur. As necessary and practicable, flocculants and chemicals will be added to treat the water if higher levels of certain chemicals and compounds are observed.

2. The use of best management practices to minimize impacts:
(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

BMPs could include creating only moderate gradients and inclines to slow down runoff or diverting waterways and drainage. With these methods, the amount and frequency of flow through active mining sites can be minimized. All the water that does leave the site will be treated with a system of sediment and treatment ponds. Each will store any runoff leaving the site and provide an adequate time to settle the sediment. As necessary and practicable, flocculants and chemicals will be added to treat the water if higher levels of certain chemicals and compounds are observed.

Additionally, an undisturbed natural barrier could be maintained throughout mining at the lowest disturbed elevation and extend from the out slope. This vegetative buffer could serve the function of improving water quality by the collection of sediment and the reduction of erosion.

With the conclusion of mining, the area will be reclaimed. Any temporarily impacted streams will be stabilized, restored, and a riparian buffer will be established. These rehabilitated streams will curb sedimentation and provide a habitat for aquatic species and wildlife. Until final bond release, various sediment and treatment ponds will remain. Discharge will be treated as necessary and practicable, to ensure that the water leaving the permit is within KPDES permit effluent limits.

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:

Water does play a key part in mining operations as far as misting/spraying the area to help alleviate airborne coal dust. However, the amount of water required for dust suppression is minimal compared to the discharge generated. Total watershed drainage area for discharge from the ponds (SS-1 to SS-35) and respective hollow fills is over 1,287 acres, with a peak discharge of over 1,035,747 gallons per minute. Water used for dust suppression in a day might be 15,000 gallons. Dust suppression is generally only required during dry times when the flow of the surface discharge is low or non-existent. No other water is needed for recycling or reuse with this operation.

A small portion (approximately 1.9 million gallons) of the total discharge generated (approximately 2.7 billion gallons over the life of the project) will be used for hydro-seeding when grade work is completed. This will require approximately 645 loads (3,000 gallons per load), with a cost of $483,750 ($750/load).

Construction of a lake for recreational purposes was also evaluated as a possible alternative. This would involve acquisition of the land, environmental and engineering surveys, and construction of a dam, at the very least. The estimated cost of this alternative is $3 million.

Argus Energy will use conservation practices to the extent practicable. Water will be used by the project for dust suppression during dry times only. However, coal mining is not a water dependent operation; thus, recycling and reuse of water would have very limited applications.

4. Application of water conservation methods:

Water collected in sediment ponds before being discharged will regularly be used for dust suppression. While only a small fraction of total discharge, reusing this water will prevent possible withdrawals from other natural streams and wells.

When practicable, the proposed project may reuse discharges containing high concentrations of solids for irrigation to reclaimed land.

Upon closing of the site, the water required for remediation, including hydro-seeding may also be provided by on-site detained water. Reusing this water will prevent possible withdrawals of other natural streams and wells.

Mining is not a water dependent operation; so conservation of water is a major concern for mining operations.

5. Alternative or enhanced treatment technology:

Several alternatives to treating water from the project area and discharging it to streams and rivers in the area have been evaluated. These alternatives include construction of a water treatment facility, construction of physical filter barriers, chemical treatment of drainage, and construction of wetlands.

Water Treatment Facility Construction of a small water treatment facility (500,000 gallons per day) on the project site would cost over $1.6 million each, plus an additional cost of approximately $50,000 for a containment reservoir. This water treatment facility would not be able to manage the large amount of water required at this site (over 1,035,747 gallons per minute peak discharge). It would require 2,983 of these small facilities or one large facility (over $4.7 billion) to handle this amount.

Physical Filter Barriers Silt fences and straw bales are designed for use with small discharges, and would not be able to handle the large discharge flow generated nor would they meet requirements of Commonwealth of Kentucky's Surface Mine Regulations as stated in 405 KAR 16:070.

Chemical Treatment Chemical treatment of drainage was also considered. The primary treatment required at this

site is the removal of sediments, which requires the use of ponds or dugouts to hold the water while the soil and debris settles out. Chemicals may be used to augment this process, but sediment removal is not possible using chemical treatment alone. It would cost at least $1.8 million to treat the entire volume of discharge at this site (approximately 2.7 billion gallons over five years).

Wetland Construction Constructed wetlands have traditionally been used for biological treatment. However, the discharge generated by this operation will require sedimentation control measures, and wetlands are not effective for treating sediment. Additionally, wetlands used for water treatment would require additional property (approximately 25.7 acres), which is not available in this particular project area. It would cost approximately $123,246 to construct these wetlands.

Hydrologic Releases No hydrologic release will occur into a stream with less than 0.1 cfs of flow, unless no other practicable alternative exists.

6. Improved operation and maintenance of existing treatment systems:

Argus Energy, LLC proposes to use ten in-stream ponds to treat discharge caused from mining operations. Of the ten, four are existing ponds that will be used for sediment and drainage control as part of this project (Ponds SS-2, SS-3, SS-10, and SS-35). Following the conclusion of mining, the area will be reclaimed, which will provide an enhanced habitat and environment.

Pumping or trucking the runoff to the nearest wastewater treatment plant will require significant changes to the Inez Waste Water treatment plant. That plant cannot receive sediment-laden water and would have to construct a sediment basin to serve a similar function to on-site sediment ponds. Furthermore the treatment plant can only handle 0.26 million gallons a day (MGD). However, the discharge could approach 1.17 MGD. (1.17 MGD is a calculated daily average of the 5-year total flow.) In order to treat this amount of runoff, the county would be forced to increase the capacity of this treatment plant. Increasing the capabilities of the treatment plant would be costly and burdensome to the county.

7. Seasonal or controlled discharge options:

The proposal for this project would include the construction of sediment ponds to ensure controlled release of generated runoff under optimal conditions. The sediment ponds reduce the velocity of storm water, thus enhancing sedimentation and reducing its deposition within the stream. In this way, a controlled volume and quality of water is released, in order to refrain from overwhelming a natural system. The ponds are designed for a 25-year, 24 hour storm event. Discharge to streams with less than 0.1 cfs will not occur when other practicable alternatives exist.

Additionally, the construction of a lake for physical detention of the water and later recreational purposes was evaluated as a possible alternative. This would involve acquisition of the land, environmental and engineering surveys, and construction of a dam, at the very least. The estimated cost of this alternative is $3 million.

Another alternative is on-site storage in 50,000-gallon septic tanks, and eventual release into the surrounding area. In order to store the amount of discharge generated at this site in one year, 41,777 storage tanks would be required, with a potential cost of over $5.0 billion for the tanks alone. 24" diameter HDPE pipe ($67/foot) would be required to transport the discharge to the tanks, with a cost of over $8.4 million for over 125,000 feet of pipe. This would require the excavation of at least 1,053 acres of land (1,037 acres for the tanks and 16 acres for the leach field) to a depth of 15 feet. Because of the amount of sediment in the discharge, the tanks would have to be cleaned out at least once per year, at a cost of approximately $279 million ($6700 per tank per year). After excavation in order to install the tanks and after each cleaning, the extra dirt and sediment would have to be added to the existing hollow fill, or used to create another hollow fill, resulting in greater disruption of the natural contours of the area.

8. Land application or infiltration or disposal via an Underground Injection Control Well

An alternative to surface discharge from the project area is sub-surface disposal. The sub-surface disposal of drainage from the project area would present safety concerns for any present deep mining operations, and the cost would be high, due to a lifting station ($218,000), 24" dia. HDPE pipe (~$67 per foot) and possibly drilling an injection well, which could cost up to $50,000 per well, depending on depth. Injecting this discharge underground would increase the potential of an outcrop blow-out or blow-out from an old adit and would require a UIC Permit. A suitable place to inject, within 0.5 miles of this site, has not been found. In addition to potential safety impacts associated with subsurface disposal, this alternative would reduce the quantity of water available to support downstream aquatic communities.

Another alternative is on-site storage in 50,000-gallon septic tanks, and eventual release into the surrounding area. In order to store the amount of discharge generated at this site in one year, 41,777 storage tanks would be required, with a potential cost of over $5.0 billion for the tanks alone. 24" diameter HDPE pipe ($67/foot) would be required to transport the discharge to the tanks, with a cost of over $8.4 million for over 125,364 feet of pipe. This would require the excavation of at least 1,053 acres of land (1,037 acres for the tanks and 16 acres for the leach field) to a depth of 15 feet. Because of the amount of sediment in the discharge, the tanks would have to be cleaned out at least once per year, at a cost of approximately $279 million ($6700 per tank per year). After excavation in order to install the tanks and after each cleaning, the extra dirt and sediment would have to be added to the existing hollow fill, or used to create another hollow fill, resulting in greater disruption of the natural contours of the area.

9. Discharge to other treatment systems

Alternative treatment works have been investigated, including piping and trucking the discharge to the nearest water treatment plant.

- It would take approximately $4.1 million (52,600 feet of 24" diameter HDPE pipe at $67/ft.) to run 24" diameter HDPE pipe to the nearest municipal water treatment plant, which is the Inez Wastewater Treatment Plant in Inez, Kentucky, 12 miles away. The Inez Sewage Treatment Plant would then require a sedimentation basin to remove the silt before allowing the water to enter their plant.

- It would require 25 trucks with a capacity of 5,000 gallons each, working 24 hours a day, to haul the discharge to the Inez treatment plant. The trucks would cost over $5.7 million ($230,000 per truck), and maintenance and gas would cost over $18,000 per day ($34.2 million over the 5-year life of the project), for a total cost of nearly $40 million.

- Additionally, the Inez Wastewater Treatment Plant cannot handle sediment-laden water and would require the construction of a large sedimentation basin. Furthermore, the treatment plant can currently only handle 0.26 million gallons a day (MGD) of wastewater, but the site discharges 1.17 MGD. In order to treat this amount of runoff, the county would be forced to increase the capabilities of this treatment plant, which would be costly and burdensome to the county.

IV. Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Signature:	Paul Horn	**Date:**	3-6-2010